

REMARKS

In response to the Office Action dated April 19, 2007, claims 1, 7, 8, 12-16, 18-22, 24 and 26 are amended, claims 2-6, 8-11, 23 and 25 are withdrawn, and claims 27-33 are newly added. Claims 1, 7, 8, 12-22, 24, 26 and 27-33 are now active in this application. No new matter has been added. Note that claim 22 has been amended into independent form.

Claims 22, 24, and 26 were objected to as being in improper form because of improper multiple dependencies. Applicant submits that this objection has been overcome by the foregoing amendments.

Claims 1, 7, 8, 12-21, 22, and 26 were rejected under 35 U.S.C. § 102(e) as allegedly anticipated by Digonnet (U.S. Patent 7,064,889). This rejection is traversed.

Claim 24 was rejected under 35 U.S.C. § 103(a) as allegedly anticipated by Digonnet (U.S. Patent 7,064,889) in view of Dejneka (U.S. Patent 6,836,607). This rejection is traversed.

Independent claim 1 recites, in pertinent part, “wherein refractive indices of the first waveguide, the clad of the second waveguide, the core of the second waveguide and the third waveguide respectively denoted by n_1 , n_2 , n_3 and n_4 satisfy a relation: $n_1 < n_4 < n_2 < n_3$.”

Similarly, independent claim 22 recites, in pertinent part, “ $n_1 < n_4 < n_2 < n_3$.”

Anticipation under 35 U.S.C. § 102 requires that “each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed Cir. 1987). At a minimum, the cited prior art does not disclose (expressly or inherently) the above recited limitations.

The Office Action, at page 2, asserts that element 154 from FIG. 2C of Digonnet discloses a first waveguide for transmitting excitation light. The Office Action, at page 3, also asserts that this same element 154 is also a clad for transmitting the excitation light.

Thus, Digonnet does not teach or suggest the four distinct elements of independent claim 1: the first waveguide with a refractive index of n_1 , the clad of the second waveguide with a refractive index of n_2 , the core of the second waveguide with a refractive index of n_3 , and the third waveguide with a refractive index of n_4 .

Further, even if element 154 from FIG. 2C of Digonnet was treated as two distinct elements (with the same refractive index, $n_1 = n_2$), the refractive index inequality of independent claim 1 ($n_1 < n_4 < n_2 < n_3$) would not be satisfied, because n_1 would equal n_2 .

Thus, Applicant submits that independent claim 1 is not anticipated by Digonnet.

Further, Applicant submits that the other cited art (Dejneka) does not remedy the deficiencies of Digonnet. Thus, Digonnet and Dejneka, even in combination, do not disclose all of the limitations of independent claim 1.

Similarly, Applicant submits that independent claim 22 is not anticipated by Digonnet.

Further, Applicant submits that the other cited art (Dejneka) does not remedy the deficiencies of Digonnet. Thus, Digonnet and Dejneka, even in combination, do not disclose all of the limitations of independent claim 22.

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as independent claims 1 and 22 are

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patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also patentable.

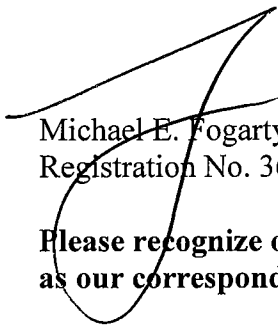
Thus, it is respectfully submitted that dependent claims 7, 8, 12-21, 24, and 26-33 are patentable for at least the same reasons their respective base claims.

Accordingly, it is urged that the application, as now amended, is in condition for allowance, an indication of which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, Examiner is requested to call the undersigned attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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